AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-13 (canceled).

Claim 14 (currently amended): A method of visualizing ~~sequence data of~~ comparison results for at least one of a plurality of biopolymer materials represented in a set of sequences ~~data~~, the method comprising:

comparing a sequence ~~data~~ of each biopolymer material to a sequence ~~data~~ of each other biopolymer material to provide respective comparison results;

arranging the comparison results in a square matrix indexed by the plurality of biopolymer materials;

creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and

projecting the context vector onto a two- or three-dimensional viewing area;

thereby visualizing ~~sequence data~~ comparison results for at least one of a plurality of biopolymer materials represented in the set of sequences ~~data~~.

Claim 15 (previously presented): The method according to claim 14, wherein from each row or column of the square matrix, a respective high-dimensional context

vector is created for each of the biopolymer materials based on the comparison results

in the row or column.

Claim 16 (previously presented):   The method according to claim 14, wherein

the comparing uses a Basic Local Alignment Search Tool.

Claim 17 (previously presented):   The method according to claim 14, wherein

the comparing provides comparison results based on an expectation of a relation.

Claim 18 (previously presented):   The method according to claim 14, wherein

the biopolymer material is protein.

Claim 19 (previously presented):   The method according to claim 14, wherein

the biopolymer material is nucleic acid.

Claim 20 (currently amended):   An apparatus for visualizing sequence data

comparison results for at least one of a plurality of biopolymer materials represented in

a set of sequences data, the apparatus comprising:

at least one memory having program instructions,

at least one computer output device for visualizing ~~sequence data~~ comparison

results, and

at least one processor configured to execute the program instructions to perform

the operations of:

comparing a sequence ~~data~~ of each biopolymer material to a sequence ~~data~~ of

each other biopolymer material to provide respective comparison results;

arranging the comparison results in a square matrix indexed by the plurality of

biopolymer materials;

creating a high-dimensional context vector for at least one of the biopolymer

materials based on a row or column of the square matrix; and

projecting the context vector onto a two- or three-dimensional viewing area,

wherein the apparatus enables visualization of the ~~sequence data of~~ comparison

results for the respective biopolymer material.

Claim 21 (currently amended):   An apparatus for visualizing ~~sequence data~~

comparison results for at least one of a plurality of biopolymer materials represented in

a set of sequences ~~data~~, the apparatus comprising:

means for comparing a sequence ~~data~~ of each biopolymer material to a

sequence of each other biopolymer material to provide respective comparison results;

means for arranging the comparison results in a square matrix indexed by the

plurality of biopolymer material;

means for creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and

means for projecting the context vector onto a two- or three-dimensional viewing area,

wherein the apparatus enables visualization of the ~~sequence data of~~ comparison results for the respective biopolymer material.

Claim 22 (currently amended): A computer-readable medium containing instructions for controlling a computer system to perform a method for visualizing ~~sequence data~~ comparison results for at least one of a plurality of biopolymer materials represented in a set of sequences ~~data~~, the method comprising:

comparing a sequence ~~data of~~ each biopolymer material to a sequence ~~data of~~ each other biopolymer material to provide respective comparison results;

arranging the comparison results in a square matrix indexed by the plurality of biopolymer materials;

creating a high-dimensional context vector for at least one of the biopolymer materials based on a row or column of the square matrix; and

projecting the context vector onto a two- or three-dimensional viewing area,

wherein the method enables visualization of the ~~sequence data of~~ comparison results for the respective biopolymer material.

Claim 23 (previously presented):   The method of claim 14, wherein the context vector is utilized for comparison of the biopolymer materials using cluster analysis.

Claim 24 (previously presented):   The method of claim 14, wherein the context vector comprises a row or column of an object attribute matrix of comparison results.